

Claims

1. Method for detecting contamination on turbine components of the turbine (3),

characterized in that,

5 at least one current oscillation characteristic value of at least one turbine component is determined.

2. Method as claimed in claim 1,

characterized in that,

the oscillation characteristic value is determined during the

10 operation of the turbine (3).

3. Method as claimed in claim 1 or 2,

characterized in that,

the oscillation characteristic value is determined while the turbine is stationary.

15 4. Method as claimed in one of the claims 1 to 3, characterized in that,

the oscillation characteristic value is compared to an oscillation reference value.

5. Method as claimed in one of claims 1 to 4, characterized in

20 that

the turbine component is a turbine blade.

6. Method as claimed in one of the claims 1 to 5, characterized in that,

at least one common oscillation characteristic value is

25 determined for a number of turbine components operated in a comparable manner.

7. Method as claimed in claim 6, characterized in that,

the number of turbine components operated in a comparable

manner is a row of turbine blades.

8. Method as claimed in one of claims 1 to 7, characterized in that

the turbine component directs hot gas.

5 9. Method as claimed in one of the claims 1 to 8, characterized in that, the oscillation characteristic value comprises an inherent frequency and/or an oscillation frequency and/or an oscillation amplitude and/or an attenuation characteristic 10 value and/or an oscillation decay behavior of the turbine component.

10. device (1) for detecting contaminants on turbine components of a turbine (3), characterized by

15 at least one sensor unit (7) for determining at least one current oscillation characteristic value of at least one turbine component.

11. Device (1) as claimed in claim 10, characterized in that,

20 the oscillation characteristic value is determined during the operation of the turbine (3).

12. Device (1) as claimed in claim 10 or 11, characterized in that, the oscillation characteristic value is determined while the 25 turbine is stationary.

13. Device (1) as claimed in one of the claims 10 to 12, characterized by

a processing unit (9), by means of which the oscillation characteristic value can be compared with a stored 30 oscillation reference value.

14. Device as claimed in one of the claims 10 to 13,
characterized in that
the turbine component is a turbine blade.

15. Device as claimed in one of the claims 10 to 14,
5 characterized in that
at least one common oscillation characteristic value can be
determined for a number of turbine components operated in a
comparable manner by the sensor unit (1).

16. Device (1) as claimed in claim 15,
10 characterized in that,
the number of turbine components operated in a comparable
manner is a row of turbine blades.

17. Device as claimed in one of the claims 10 to 16,
characterized in that
15 the turbine component directs hot gas.

18. Device as claimed in one of the claims 10 to 17,
characterized in that
the oscillation characteristic value comprises an inherent
frequency and/or an oscillation frequency and/or an
20 oscillation amplitude and/or an attenuation characteristic
value and/or an oscillation decay behavior of the turbine
component.